

A Flying Hotel Built in an Aeroplane's Wings

All the Comforts of Home No Matter Where They Land for the Globe-Circling Passengers of This Proposed Aerial Inn

Pictorial Diagram of the Proposed 1,000 Foot Aeroplane with the Hotel in Its Wings. The Upper Planes Will Be Fifteen Feet High, Housing All Machinery, Passengers and Freight. Along the Enormous Tail Stretches the Promenade. The Size of the Passengers Has Been Drawn Larger for Clarity. Life Boats for Over-Ocean Accidents Are Shown on the Top of the Planes at the Right. Small Planes Would Serve the Same Purpose During Over-land Flights.

A Peep Into the Future?
How the Stage Imagines Mme. Fashionable—of 1930 Say—Descending from Her Dainty Landaulet Plane and Being Welcomed to a Garden Party.



phones would of a necessity be in evidence, and the ship would be in constant touch with either or both shores of the Atlantic. All discomforts due to any form of travel on land or sea would be absent in such a ship of the air. This very thing would cause travel to gradually cease by the more ancient methods now used.

"The first cost of a ship of this type would probably be about \$3,000,000, but ships put on a production basis would bring the cost down to approximately \$1,500,000."

Some commentators of the day would have us believe that the big Handley-Page flying boat, the largest heavier-than-air machine built so far in this country, is of transatlantic proportions. It is not. It has not the fuel-carrying capacity for such a trip. By the shortest route England is about 3,000 miles distant from New York. Its speed is reported to be eighty miles an hour. At this rate the NC-1 would take about thirty-eight hours to reach Queens-town from New York. To-day it carries only sufficient oil and gasoline to stay aloft thirteen hours. Even if its live load capacity of four and a half tons was given over entirely for the needed supply of fuel its capacity would still fall short of requirements. The Handley-Page machine's wing-spread of 126 feet would have to be appreciably increased to support the weight that would have to be carried in a transoceanic flight.

While European nations are making great strides in the development of commercial dirigibles there is nothing to indicate that any one of these countries—save Italy, perhaps—will produce a heavier-than-air machine of transoceanic dimensions in the near future.

Giannini Caproni's prediction made last Summer, that America would make the greatest advances in the early production of commercial airplanes comes true in the light of the machine now being constructed by Dr. Christmas and his associates and in the plans now under discussion for a gigantic 1,000-foot wing-spread air liner.

Whether Italy or the United States will gain the honor of making the initial commercial flight by airplane involving transoceanic travel depends upon the speed with which these American builders and Caproni finish their respective machines.

Dr. Christmas, in explaining for readers of this newspaper his project, said: "The airplane which we are building is bigger than any which has ever been constructed. It will have a wing-spread of 180 feet and will carry on its first trip ten passengers. Four of this number will constitute the crew. There will be two aviators, one engineer and a captain. The same comforts will be furnished aboard as may be found on the ordinary ocean steamer. This is to say, there will be sleeping accommodations and provision made for serving meals. Separate cabins will be built, and the sleeping quarters will be as large as the cross-section of four Pullman cars—that is, if two were placed on top of the other two. The width would therefore, be fourteen feet.

"The covered-in section of the fuselage, where the useful load would be carried, is sixty-four feet long, but the total over-all length will be 114 feet. The total weight of the plane is twenty-seven tons, and this allows for carrying 30,000 pounds of gasoline. The kitchen will be fitted up for Great Britain Rights Reserved.

"Many things of real importance concerning safety, comfort and certainty of operation can successfully be carried out in a large machine. A large airplane of 1,000 feet wing-spread would have approximately a surface area of, say, 280,000 square feet, with a chord, or width of wing, of about 150 feet.

"Its full weight, loaded with everything for the transatlantic trip, would be about 3,200,000 pounds. Of this weight, the passengers, crew and express matter would use up about 700,000 pounds. Her horsepower would be about 100,000 giving a speed of from eighty to one hundred miles per hour.

"Such a ship would have twelve propellers of a diameter of fifty feet, and these would be three-bladed, turning about 600 revolutions per minute. There would be necessary twenty-four motors, which gives each propeller two motors of about 4,200 horsepower each.

"A very great departure possible in a ship of this size would be the entire absence of a body or fuselage of the ordinary type. Everything of whatever nature, including motors, machinery, staterooms, dining rooms and, in fact, all accommodations, could be inside the wings. To further explain, I will say that the wings of such a ship would be fifteen feet thick. As the average height of a ceiling of a room is nine feet it can be readily seen that all of the rooms and accommodations can easily be within the wings.

"This, of course, allows for the best of accommodations and all the room one could wish for. The outrigger longerons which carry the tail would be so large that the inside could be used for lounging corridors of sufficient length to satisfy anyone who would like the exercise of walking. As the length of the ship fore and aft would be about 600 feet, such a promenade would be very popular.

"In a ship of such completeness the means of safety, ease of control and comfort would be the very last word in every up-to-date appliance. All heating, lighting and controls would be done by electricity and in duplicate to prevent accident and discomfort. Wireless telegraph and tele-

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WITH all the nations seeking the honor of establishing the first system of transoceanic and transcontinental air commerce through the medium of huge dirigibles, as discussed in this section last week, adherents of the heavier-than-air machines are rapidly forming plans for the construction of a gigantic aeroplane which will carry more passengers and freight than any dirigible projected.

This machine is now being drafted in the United States. It will have a wing-spread from tip to tip of its upper planes of one thousand feet; the planes will be one hundred and fifty feet in depth and fifteen feet high from bottom to roof.

Within these upper planes will be built what amounts to a modern hotel, and in them will be housed also the powerful machinery that will lift and drive the monster.

There will be no fuselage or body as it is known to those familiar with aeroplanes. Beneath the tremendous wing-spread and enclosed within it will be luxurious cabins that will house one hundred and thirty passengers, dining rooms, gymnasiums, gardens and all the equipment of an up-to-date hostelry.

The thousand feet wing-spread is eight times greater than that of the largest flying boat, the NC-1 of the United States Navy. The flying hotel will be able to carry three hundred and fifty tons of passengers, baggage and freight, besides its own enormous weight.

While its first trip is planned from New York to Queenstown, the extraordinary principles and construction of this machine do not limit it to transoceanic flight. Nowadays, if one wants to tour the world it is necessary to disembark from boats and railroad trains to one hotel after another. The flying hotel obviates this.

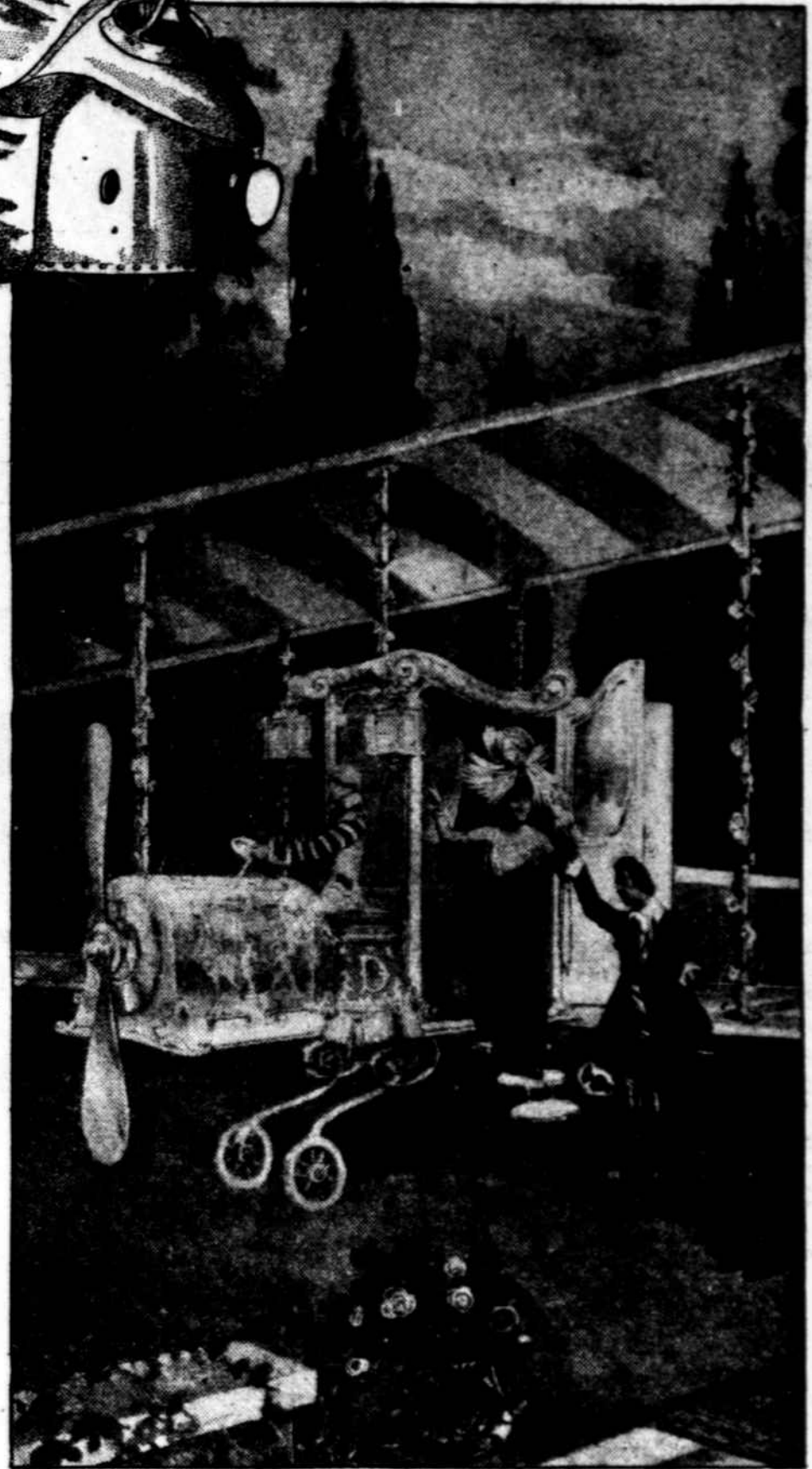
Passengers wishing to make a tour would fly from New York, say, to Spain. They would not have to change quarters, but would continue to sleep and eat in the aeroplane itself. Moving from Spain they would, perhaps, drop in on Algiers, thence to Central or Eastern Africa, and thence wherever they pleased—and not once would they have to patronize any other hotel, than that which was being carried along with them.

Dr. William W. Christmas, of New York, has already designed a large machine for transatlantic flights, and it is now under construction at one of his factories. When finished this plane will carry on air traffic as a purely commercial proposition. As far as can be learned this corporation is the first in the United States, if not in the world, to begin construction of a heavier-than-air machine especially planned for passenger service across the ocean.

Dr. Christmas has given to this newspaper the details of the craft. These will be discussed further in the story. Being an aeronautical expert and authority on aerodynamics he was asked to express his views concerning this proposed colossal flying machine with a wing-spread as long as five city blocks.

He said: "Naval architects agree that there is no limit to the size of a ship. Commercial demand is the sole arbiter of size and capacity. It is believed that ships of 1,200 feet in length are in the immediate future. The same calculations and the same methods are used in both the ship of the sea and the ship of the air.

"There is no real obstacle to surmount in building the airplane of 1,000 feet wing-spread. She would be a larger ship than usual, that is all. In fact, the large airplane is an easier ship to build than a small one, because things macroscopic are much easier to handle than things microscopic.



The Proposed 1,000 Foot Plane Will Carry 900 Tons Outside Its Own Weight—Or the Equivalent, With Its Crew, of a Freight Train of 23 Cars Each of 30 Tons Capacity.

electrical cooking. An auxiliary plant will furnish the heat, light and control of the airplane. A machine of this size is too large entirely to be handled manually. In order to properly manoeuvre it the plan calls for automatic electric control.

"All machinery will be housed in the fuselage, which is the practical place to put it. The propellers will be outside, hung on brackets. These will weigh 1,100 pounds each and make 600 revolutions per minute. We use a three-bladed propeller. The engines—and there are four separate motors—develop 3,200 horsepower. Only two of these will be operated while in the air. The horsepower developed by any two will be sufficient to maintain a speed of 100 miles per hour, and with this power and fuel which can be carried the machine will have a cruising radius of thirty-five hours, which is ample.

"By taking the shortest, and, therefore, the most practical and advantageous route the flight, say, from New York to Queenstown, will be made in thirty hours—that is the flying time we have set for our plane. Let me say in this connection that those proposals which have been made to fly from New York to Bermuda, thence to

the Azores and then to Europe are futile from a commercial standpoint. When a man wants to get to England he wants to get there as quickly as it is possible to travel and the shortest route is that of the steamship lines. This is the route we propose to follow.

"The craft I have planned will travel at a height of 10,000 feet during the journey.

By doing this we are likely to have more favorable air conditions and effect a great saving in gasoline consumption, thereby increasing the machine's radius of action.

"It will not be a flying boat. It will be a land machine. There is no sense whatever in constructing a boat. The fuselage adds great weight in the case of a boat, and that is the great trouble to-day with some of our large machines. The layman has the idea that a boat in flying across the water adds to the element of safety. The machine which we are building—should it have to make a forced landing on the sea—will be just as safe from destruction or sinking. This airplane will stay afloat for two days. The wings are two feet thick, and as the material covering them is waterproof they will act just the same as pontoons. Every provision has been accounted for to safeguard the lives of the passengers. We shall carry collapsible lifeboats, lifebuoys and parachutes.

"The organization of our motor units prevents all of them from getting out of order at the same time. As I have said, only two will be used, and should any one of these or both get out of working order one of the others or both can be immediately thrown into action."